Administration Crisis of Electronic Information Resources in Academic Library: A Case Study

Nazeer Badhusha, K
Mohamed Sathak Engineering College
Keelakarai, India

ABSTRACT: *This study examined the problems encountered in managing electronic information resources (EIRs) in the academic library system. Case study design was employed to achieve the research objectives. The population of the study consisted of 200 staff of the Academic library. Questionnaire was the main instrument used for data collection. Out of the 200 copies of the questionnaire administered to the respondents, only 95 copies were correctly filled and used for this study. The data collected were analyzed using mean (X) and standard deviation (SD), while t-test was used to establish the significance of the responses of the library staff on the dimensions of the problems of managing EIRs in the academic library. The management problem areas identified in this study consisted of academic policies or practices, funding, staffing and information technology infrastructure. Strategies for enhancing effective management of electronic information resources were identified, and recommendations based on the findings of the study were also made.*

Keywords: Electronic Resources, Management of E - resources, Digital Library, Electronic Library

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1. Introduction

One of the functions of an academic library is to provide resources and services for its users. University libraries all over the world are facing the challenge of the paradigm shift from the traditional environment to the electronic environment. In the electronic environment, these libraries are expected to provide information resources in a variety of formats and provide innovative services to their users. In other words, they are expected to provide abundant E-resources to meet the ever increasing demands of users. An electronic information resource is defined as the information resource that is accessed via the internet (Okore et al., 2009). This definition is extended in this paper to include CD-ROMs because CD-ROM resources can be accessed online. Accessibility of these resources is re-defining the vision and mission of university libraries today. Okore et al. (2009) identified specific types of electronic information resources as consisting of electronic books (e-books), electronic journals (e-journal), indexes, collections of journal articles, reference works, digital collections, databases and websites. This implies that there should be coordinated effort to select, acquire, catalogue and maintain them; and this is what management of electronic resources in libraries is all about. Yu and Breivold (2008) defined electronic resource management as the practices used by

librarians to keep track of important information about electronic information resources, especially internet based resources such as electronic Journals, databases, and electronic books. However, literature has shown that majority of the academic libraries in developing countries do not have enough of electronic information resources for their users (Aguolu and Aguolu, 2002). This implies that there may be management problems that hinder the development and use of these resources in academic libraries in developing economies. Since its inception in 1960, the library system of the academic has a sizeable collection of books, journals and other specialized materials. The academic library has a number of CD-ROM collections and subscribes to some online databases such as OARE, JSTOR, AGORA, HINARI and EBSCOHOST. The library also provides an internet -platform for access to the library-based online databases and for remote access to internet -based resources. The institutional repository (IR) is being developed by the academic library and was lack accessibility due to the absence of management software. How-ever, the automation environment requires integrated library software (ILS) for the management of the traditional content and electronic resources management systems (ERMs) for the management of the electronic content. In the management of the traditional content, the library has settled with library software. The apparent lack of ERMs is responsible for the slow pace of the digitization of the academic library. Though other contributory factors may include human and material resources, any strategic plan targeted at addressing this problem would be holistic to achieve results. The present study is therefore an attempt to address this issue, and is intended to examine the problems encountered in managing electronic information resources (EIRs) in the academic library system.

2. Review of Literature

There is a great deal of literature devoted to different types of electronic resources. However, very little is written about electronic information resource management and its problems in libraries. Efforts were made in the literature to solve the problems of management of EIRs from the use of these resources in libraries by staff, students and researchers. Many libraries have embraced the use of electronic information resources (EIRs), including CD-ROM, the internet, and the world wide web (www) for provision of information services. A number of reasons have been advanced for preference of EIRs by libraries and information centres. Some of these reasons, according to Iwehabura (2009) include the ability to provide faster and easier access to current information by users in various places such as homes, offices and other workplaces, hostels and dormitories; easy storage and the possibility of sharing the same information resources among many users at a time, saving space with relatively easy maintenance and easy linkage to indexing and abstracting databases. The internet for example, provides the opportunity to access a wide range of topics on different subjects. It also allows students, staff and other researchers to retrieve information from diverse sources such as e-journals, e-books, databases, newspapers and other sources. Furthermore, it offers the students the opportunity to control their learning and helps them to have interactions with information pertaining to their needs (Jones et al., 2002; Healey, 2003). Electronic information resources are used for academic and research activities in higher educational institutions (Iwehabura, 2009). Internet resources such as online databases, e-books, and e-journals were among the EIRs used for academic purposes. Other resources found to be used were CD-ROMs and OPAC (Online Public Access Catalogue). Nawe and Kiondo (2005) have shown that 21.7% of the respondents reported that research quality had improved significantly with the use of electronic information resources. Results of the study also revealed that the quality of teaching and learning had improved significantly as a result of information and communication technology (ICT) application in library operation. Meanwhile, despite the importance of and advantages offered by EIRs, studies have identified a number of problems associated with their use. These problems range from lack of or inadequate resources, mainly computers, and poor internet connectivity, inappropriate usage to lack of appropriate skills among users. In addition, Johnston and McCormack (1996) posit that: "a perceived lack of various resources such as time, equipment or funds, lack of training and insufficient technical support staff and risks associated with implementing innovations in teaching, particularly those using technologies, are the most significant barriers to academic staff using information technology in their teaching".

Staff Category	No	Percentage (%)
Professional Librarians	45	29.8
Non-professional Librarians	106	70.2
Total	151	100

Table 1. Characteristic of the Respondents

Moreover, while other researchers have shown that the use of the internet and other EIRs by students was limited by inadequate number of computers and access points (Malekani, 2006; Luambano and Nawe, 2004; Jagboro, 2003; Ojedokun, 2001), Hung (2004) argues that lack of skills in searching the internet is one of the limitations that affect its proper utilization (Hung, 2004). This explains why students limit themselves to searching for and reviewing information on entertainment, sports and news from around the world instead of using the internet for academic matters. On the strategies for changing the situation, Okoye and Ugwuanyi (2012) were of the opinion that institutions should provided fund on that library should provide pragmatic training to student, libraries to enable them to handle e-resources.

3. Purpose of the Study

The purpose of this study is to identify the problems related to the management of electronic information resources in academic library. The specific objectives of the study are:

• To identify the policies and reforms that constitutes problems to the management of electronic information resources in academic library,

• To identify the problems associated with funding that affect the management of electronic information resources in academic library.

• To ascertain the problems of staffing that affect the management of electronic information resources in academic library.

• To ascertain the IT-related problems that affects the management of electronic information resources in academic library.

• To identify the strategies for enhancing the management of electronic information resources in the academic library.

4. Methodology

Description	Professional Librarian		Non-Professional Librarian		t	Decision*
	X	SD	X	SD		
The academic librarian has no free hand in developing e-resources	1.82	0.98	1.70	1.10	0.56	NS
The academic library administration has no regard for the library	1.85	0.99	1.65	1.08	0.93	NS
There is no policy for e-resources development in the academic library system	3.70	0.56	3.44	0.61	2.15	S
The academic library administration determine how the library should be run	1.70	1.05	1.80	0.99	-0.47	NS
The academic librarian has no free hand in taking decisions in developing library services	1.70	1.11	1.90	0.98	-0.91	NS
The academic library administration imposes its decision on the library	1.85	0.99	1.75	1.02	0.48	NS
The academic library management does not participate in decision making in matters relating to the library at the higher level of university administration	1.65	1.09	1.85	0.97	-0.92	NS

* *NS* – Not significant *S* - Significant

Table 2. Descriptive statistical analysis ad t-test on administrative policies affecting management of electronic information resources

This study employed a case study design to investigate the perceived problems of management of electronic information resources (EIRs) in the academic library. The population of the study consisted of the library staff of the academic library system. A total of 200 staff of the library was studied. The library staff consisted of 50 professional and 150 non-professional librarians as shown in Table 1. The instrument used for data collection was a questionnaire. The questionnaire consisted of five sections covering the research issues of the study. The questionnaire was trial tested to determine its internal consistency by using the alpha co-efficient procedures. The coefficient alpha analysis yielded reliability coefficients of 0.86, 0.74, 0.76, and 0.71 for sections B, C, D and E. These alpha values are high enough and they show that the instrument is reliable. Out of the 151 copies of the questionnaire distributed, a total of 100 were correctly filled and used for the study. This gave a response rate of 62.5%. Data collected were analyzed using mean (X) and standard deviation (SD), while t-test was used to establish the significance of the responses of the library staff on the dimensions of the problems of managing EIRs in the academic library.

5. Results

The findings of the study are summarized and presented in the following tables. Table 1 shows the distribution of the workforce of the academic library. This consisted of Professional Librarians (29.8%) and non-professional librarians (70.2). The non-professional librarians are made up of Senior Technical Staff (26.5%), Senior Administrative Staff (9.9%) Junior Technical Staff (29.2%) and Junior Administrative Staff (4.6%). Table 2 shows the administrative policies and practices that affect the management of electronic information resources in the academic library. The findings revealed that the academic librarian enjoys some level of freedom in the day-to-day running of the academic library. The major management problem is apparent lack of policy for e-resources development ($t = 2.15$, $p < 0.05$). Table 3 shows the funding problems that affect the management of EIRs in the academic library. The results showed that the funding problems include no specific budget for electronic information resources ($t = 3.45$, $p < 0.05$); funds for the library are disbursed piecemeal ($t = 3.26$, $p < 0.05$) and insufficient budget allocation to meet the needs of the library ($t = 2.98$, $p < 0.05$). These findings showed that funding is a problem affecting the management of EIRs in the academic library. Table 4 shows the personnel problems that affect the management of electronic information resources (EIRs) in the academic library. The results showed that the personnel problems included lack of ICT skills among the library staff ($t = 2.45$, $p < 0.05$) and many of the library staff do not have background training in Library and Information Science ($t = 2.11$, $p < 0.05$). These factors are significant enough to hamper meaningful library development. This therefore implies that the library has personnel problems that affect the management of its EIRs. Table 5 shows the IT-related problems that affect the management

Description	Professional Librarian		Non-Professional Librarian		t	Decision*
	X	SD	X	SD		
The academic library board is to change of managing library funds	1.45	1.09	1.55	1.04	-0.45	NS
There is no specific budget allocation of electronic information resources	.3.85	0.48	3.45	0.56	3.74	S
There is no specific budget allocation for the library	2.28	0.81	2.12	0.90	0.91	NS
The library budget allocation is not sufficient to the grapple with the needs	3.68	0.50	3.36	0.54	2.98	S
The library budget is spent without input from the library funds for the library are disbursed piecemeal	1.55	0.91	1.45	0.97	0.48	NS
Funds approved for project development in the library are not released on time	1.72	0.89	1.58	0.96	0.73	NS

**NS* – Not significant *S* - Significant

Table 3. Descriptive statistical analysis and t –test on funding problems affecting management of EIR's

of EIRs in the academic libraries. These problem as indicated in the table included that the library is not fully automated (t =3.70, $p < 0.05$), ICT infrastructure is poorly developed (t = 3.39, $p < 0.05$), and there is an absolute need for requisite equipment for library operations (t = 3.30, $p < 0.05$). These results showed that the academic library has IT-related problems that affect the management of its EIRs. Table 6 shows the strategies for enhancing the management of EIRs in the academic library. The results showed that the most effective of the strategies are formulation of policies for the development of EIRs (t =2.75, p <0.05) and setting aside a percent of the library budget for the development of EIRs. These findings showed that there is need for a strategic plan for the management of EIRs in the university.

Description	Professional Librarian		Non-Professional Librarian		t	Decision*
	X	SD	X	SD		
The academic library lacks the required number of staff with which to function	2.10	0.99	1.94	1.01	0.72	NS
Many professional staff lacks ICT skills	3.90	0.43	3.70	0.49	2.11	S
Promotion of library staff is based on qualification	3.07	0.61	2.95	0.75	0.86	NS
Promotion of library staff is performance based	3.08	0.70	2.92	0.82	1.02	NS
Working condition are poor	1.70	1.05	1.80	0.99	-0.47	NS
There is a high degree of professional staff turnover because of working condition	1.36	1.10	1.44	1.09	-0.35	NS

**NS* – Not significant *S* - Significant

Table 4. Descriptive statistical analysis and t-test on personal problems affecting management of EIR's

Description	Professional Librarian		Non-Professional Librarian		t	Decision*
	X	SD	X	SD		
The equipment available is outdated	1.58	0.63	1.42	0.70	1,17	NS
The academic library is not fully automated	3,80	0.59	3.34	0.61	3,70	S
There is an absolute need to requisite equipment for the library operations	3,82	0.60	3.40	0.63	3.30	NS
The Library does not have internet facilities	2.12	0.83	2.30	0.71	-1.11	NS
The ICT infrastructure is poorly developed	3.30	0.50	2.90	0.55	3.30	NS
The work facilities available are not suitable for library operations	2.34	0.69	2.28	0.75	0.40	NS

**NS* – Not significant *S* - Significant

Table 5. Descriptive statistical analysis and t-test on IT related problems affecting the management of EIRs

Discussion: The problems of management of electronic information resources (EIRs) have been found to be multi-dimensional. These problems appear to be compounded because of the limitations of use of electronic information resources in university libraries. The results showed that the libraries of the academic library do not have a policy for development of EIRs. This is indeed an administrative policy or practice that constitutes a problem for managing the library's EIRs. Management of EIRs begins with keeping track of them in the library and e policy that defines what should be acquired and how where to acquire them is lacking, the collection or development of EIRs in the library will be affected. This will result in apparent lack of EIRs in the library.

Description	Professional Librarian		Non-Professional Librarian		t	Decision*
	X	SD	X	SD		
Training needs of the professional staff should be identified	3.56	0.64	3.34	0.71	1.58	NS
The ICT skills of the staff should be enhanced	3.63	0.51	3.37	0.60	1.92	NS
Development of Information Literacy programs	3.34	0.56	3.42	0.70	-0.59	NS
There should be policy for the development of EIRs	3.72	0.35	3.57	0.40	2.75	S
A certain percentage of the library budget should be set aside for the development of EIRs	3.73	0.35	3.57	0.40	2.08	S
Fund allocation to the library and implementation should be increased and promptly released	3.42	0.62	3.58	0.51	-1.34	NS
Fully integrated library automation should be developed	2.99	0.71	3.01	0.62	0.14	NS
ICT infrastructures should be developed for efficient library services and operations	3.23	0.58	3.19	0.60	0.33	NS

**NS* – Not significant *S* - Significant

Table 6. Descriptive statistical analysis and t-test on strategies for enhancing the management of EIRs

Another management problem of EIRs in the academic library is funding. The results showed that there is no specific budget allocation for the development of EIRs; the library budget is not sufficient to meet the needs of the library, and the funds for library development are disbursed piecemeal. These factors make it even more difficult for the academic library to have an up-to-date print collection let alone EIRs that are capital intensive and require specialized training and retraining. This training may not be possible because of lack of funds and it has a multiplier effect in the sense that when the librarians, who are to teach information literacy skills do not possess these skills themselves, the library users will suffer the same fate. This supports the finding by Ray and Day (1998) that students access to EIRS is affected due to their lack of effective information retrieval skills. The results also showed that staffing is another problem that affects the management of EIRS in the Academic library. Many of the library staff does not have background training in library and information science. Among the professional librarians, many do not have ICT skills. These findings are not unexpected because of the de-creasing budgetary allocations to the academic library. It has also been found that there are information technology factors that affect the management of EIRS in the academic library. One of these factors is that the academic library system is not fully automated. There is also an absolute need for requisite equipment for library operations. In addition, the ICT infrastructure is poorly developed. With the basic ICT infrastructures lacking in the academic library, it will be difficult to keep track of EIRS and more difficult to organize them in order to provide access to them. These results support the findings by Malekani (2006), Jagboro (2003) and Ojedokun (2001) that the use of the internet and other EIRS by students was limited by an inadequate number of computers and access points. Finally, the results

showed that the strategic plan of the academic library for enhancing the management of its electronic information resources should address a lot of issues. These issues span the critical success factors for the development and use of EIRS in the academic library and they include development of ICT policy and fund allocation to the library for innovation and creativity within the context of EIR development in the Academic library.

6. Conclusion

The academic library environment is changing. Academic librarians are advised to keep pace with changes otherwise they will be left behind. Providing unlimited access to electronic information resources in the academic library as well as keeping track of them is one way of keeping pace with change. The success of the academic library in electronic resources provision depends on its ability to contend with the problems associated with the management of EIRS. These problems are found to be linked with administrative policies/ practices, funding, staffing and e-resources provision using ICT.

7. Recommendation

Based on the findings of this study, the following recommendations are made:

a) Budget allocation for development of EIRs: A certain percentage of the library budget should be allocated to the development of electronic information resources in the academic library. Funding issues may also be addressed by diverting funds from the print resource allocations or by canceling some journal titles in order to get enough money for new resources. Another option could be to participate in library networks or consortia to enjoy the benefits of discounts. Finally, the Academic library may explore the option of making constant requests to the academic library administration for sufficient funds allocations for electronic resource development and collection.

b) Re-skilling of Librarians: Librarians and other paraprofessionals should be trained and retrained so as to function effectively in an IT-driven information environment. The acquisition of requisite ICT skills will help them to develop digital information resources or strategically plan for the management of EIRs.

c) ICT Infrastructural Development: There should be a policy as well a strategic plan for ICT infrastructural development in the academic library. This will provide an enabling environment for the organization and use of EIRs in the academic library.

d) Commitment to Digital Library Projects: These digital projects that need to be developed in the academic library include integrated library automation, creation of standardized databases, digitization of theses and dissertations, and creation of various types of institutional repositories (IRS). Commitments to each of these projects will redefine, reposition and reinvent the academic library for user-centered services.

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